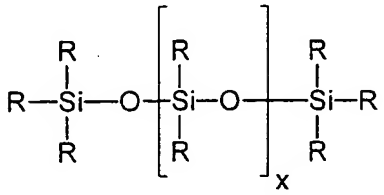
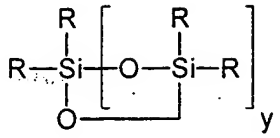
We claim:

1. A siloxane oligomer represented by the formulae I or II



I



II

in which x is an integer from 0 to 1000, y is a number from 1 to 1000, and the substituents R are identical or different and are each a member selected from the groups consisting of functionalized alkyl groups, (C_1 – C_{18}) alkyl, (C_1 - C_4)alkoxy, (C_1 - C_4)haloalkoxy, phenyl, aryl, aralkyl and hydroxy groups, wherein at least one functionalized alkyl group is present per oligomer molecule.

2. The siloxane oligomer according to claim 1, wherein the functionalized alkyl group is a halogenated alkyl, aminoalkyl, methacryloxyalkyl, mercaptoalkyl, thiocyanatoalkyl or azidoalkyl group.

3. The siloxane oligomer according to claim 1, wherein the functionalized alkyl group is a disulfide or polysulfide bridge S_x, where x has a value between 2 and 8, which joins two functionalized alkyl groups via the disulfide bridge or polysulfide bridge.

4. The siloxane oligomers according to claim 1, wherein the siloxane oligomer is an individual compound with a defined molecular weight.

5. The siloxane oligomer according to claim 1, wherein the siloxane oligomer is an oligomer mixture with a molecular weight distribution.

6. A process for the production of the siloxane oligomer according to claim 1, comprising treating a halogenalkyltrihalogensilane to oligomerization in the presence of alcohol and water and optionally co-oligomerized with at least one of a (C_1-C_{18})-alkyl-, phenyl-, aryl- or aralkyl-trihalogensilane and silicon tetrachloride, optionally modifying a halogenalkyl function in a further step.

7. The process for the production of the siloxane oligomer according to claim 6, further comprising modifying the halogenalkyl function with ammonia and separating ammonium halide.

8. The process for the production of the siloxane oligomer according to claim 6, further comprising modifying the halogenalkyl function with sodium methacrylate or potassium methacrylate and separating sodium halide or potassium halide.

9. The process for the production of the siloxane oligomer according to claim 6, further comprising modifying the halogenalkyl function with ammonia and hydrogen sulfide or ammonium hydrogen sulfide and separating ammonium halide, or modifying with sodium hydrogen sulfide or potassium hydrogen sulfide separating sodium halide or potassium halide.

10. The process for the production of the siloxane oligomer according to claim 6, further comprising modifying the halogenalkyl function with sodium, potassium or ammonium rhodanide and separating sodium, potassium or ammonium halide.

11. The process for the production of the siloxane oligomer according to claim 6, further comprising modifying the halogenalkyl function with sodium azide and separating sodium halide.

12. The process for the production of the siloxane oligomer according to claim 6, further comprising modifying the halogenalkyl function with sodium polysulfide or with sodium sulfide and sulfur or sodium polysulfide and sodium sulfide, and separating sodium halide.

13. A rubber composition containing the siloxane oligomer according to claim 1 as a coupling agents.

14. A rubber composition, comprising rubber, at least one of a precipitated silica and carbon black, and a siloxane oligomer according to claim 1.

15. The rubber composition according to claim 14 wherein the rubber is polybutadien, polyisoprene, styrene/butadiene copolymers with styrene content of 1 to 60 wt. %, isobutylene/isoprene copolymers, butadiene/acrylonitrile copolymer with acrylonitrile content of 5 to 60 wt. %, ethylene/proplyene/diene copolymer or mixtures of these rubbers.

16. The rubber composition according to claim 14 further comprising at least one of a reaction accelerator, reaction retarder, anti-ageing agent, stablilizer, processing auxiliary, plasticizer, wax, metal oxide, and activator.

17. A process for making a rubber composition comprising mixing a rubber with the siloxane oligomer according to claim 1, a filler and optionally a rubber auxiliary substance in at least one thermomechanical mixing stage at 100 to 170°C, and adding the resulting mixture to an internal kneader or roller at 40 to 110°C together with a crosslinking agent.

18. The process according to claim 17 further comprising shaping the resulting rubber composition into the desired article and vulcanizing to obtain a vulcanized rubber article.

19. A rubber tire containing the siloxane oligomer of claim 1.

20. A shaped rubber article containing the siloxane oligomer of claim 1.